

PCTINTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C08K 9/00	A1	(11) International Publication Number: WO 00/53672 (43) International Publication Date: 14 September 2000 (14.09.00)
(21) International Application Number: PCT/US00/06254 (22) International Filing Date: 10 March 2000 (10.03.00) (30) Priority Data: 60/124,102 12 March 1999 (12.03.99) US (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 60/124, 102 (CON) Filed on 12 March 1999 (12.03.99) (71) Applicant (for all designated States except US): ALPHAGARY CORPORATION [US/US]; Pioneer Industrial Park, P.O. Box 808, Leominster, MA 01453 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): NASEEM, Homaira [US/US]; 14 Slyvan Lane, Boylston, MA 01505 (US). O'HARA, Charles, J. [US/US]; 13 Captain Samuel Forbush Road, Westboro, MA 01581 (US). (74) Agents: FIESELER, Robert, W. et al.; McAndrews, Held & Malloy, Ltd., 34th floor, 500 W. Madison Street, Chicago, IL 60661 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: BEVERAGE CONTAINER CLOSURE AND SEALANT LAYER MATERIAL		
(57) Abstract A melt-processible composition for molding closures and sealant layers for beverage containers has improved gas barrier properties. The composition comprises: a) a thermoplastic base polymeric material and b) a quantity of layered magnesium aluminum silicate clay having platelets with a diameter of approximately 1 micron. The magnesium aluminum silicate clay is preferably nanocomposite, montmorillonite clay. The preferred base material for beverage container closures is polypropylene, polyethylene and/or a propylene/ethylene copolymer. The preferred base material for beverage container sealant layers is an ethylene-vinyl acetate copolymer, polyethylene, styrene ethylene butadiene styrene polymer, styrene butadiene styrene polymer, ethylene propylene diene monomer, and metallocene polymers.		